

P.E.T. CASE OF THE MONTH

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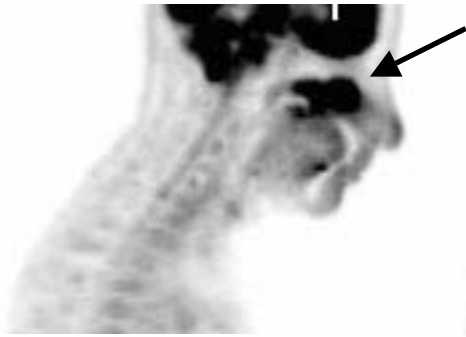


Fig. 1
Before chemotherapy



Fig. 2
After 4 cycles chemotherapy

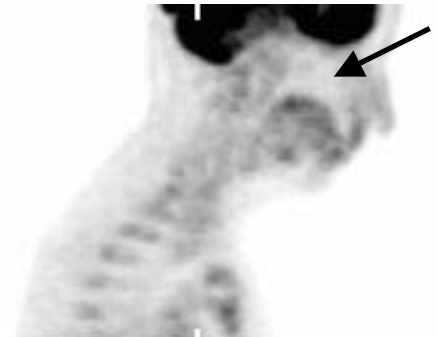


Fig.3
After last chemotherapy

This 42 year old man presented with prolonged nasal congestion with subsequent bloody nasal discharge. The CT scan of the maxillo-facial sinuses only showed mucosal thickening consistent with sinusitis and rhinitis. A biopsy of the nasal turbinates revealed a lymphoid infiltrate. Further evaluation of the material was consistent with the diagnosis of **nasal NK/T cell lymphoma**. A PET scan was obtained for staging, which showed:

- Markedly increased FDG uptake in the ethmoid sinuses with a maximum SUV of 16.4 (Fig.1, arrow)
- No evidence of other sites of lymphoma in the neck or in the rest of the body

The patient was treated with 4 cycles of CHOP chemotherapy. A second PET scan was obtained which showed a considerably smaller area of mildly increased FDG uptake in the region of the ethmoid sinuses (Fig. 2, arrow) consistent with persistence of a small amount of active tumor.

The patient received 2 additional cycles of chemotherapy and the repeat PET scan showed no evidence of residual active tumor (Fig. 3, arrow). The patient was then scheduled for adjuvant radiation therapy.

How did the PET help: The PET scan was able to document a response to chemotherapy. In light of lack of CT findings on the initial sinus CT, the PET was the only reliable imaging study to follow the patient.

In a recent study, 70 newly diagnosed patients with aggressive non-Hodgkin's lymphoma who were treated with chemotherapy underwent a FDG-PET scan at mid treatment. Thirty three patients showed persistent abnormal FDG uptake and none of these patients achieved a durable complete remission, whereas 37 patients showed a negative scan and of those, 31/37 remained in complete remission with a median follow-up of 1107 days (1).

(1) Annals of Oncology 2002;13:1356-1363

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This case and previous ones can be seen at
www.petcases.com